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EXAMINER

HUFNAGEL, GEORGE F

ART UNIT	PAPER NUMBER
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3712

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,341

Applicant(s)

NAKASHIMA ET AL.

Examiner

George F Hufnagel

Art Unit

3712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Specification

0. The abstract of the disclosure is objected to because it is longer than 150 words. Correction is required. See MPEP § 608.01(b).

ADD SPEC OBJECTION ABSTRACT TOO LONG

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 2 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitation "having a two-dimensional structure", which is unclear regarding the exact structural element applicant intends to claim as the invention. Claim 9 recites the limitation "a communicating holes being provided", which is unclear regarding the actual number of holes applicant intends to claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12, 14, 15 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishigaki.

Regarding claim 12, Ishigaki discloses all of the elements of the claim in figure 2, including a writing instrument (liquid applicator) for water-metachromatic members with which writing instrument any desired writing image is formed by means of water (liquid) on a water-metachromatic member comprising a support and provided on the surface thereof a porous layer formed of a binder resin to which fine-particle silicic acid stands fixed dispersedly, and capable of rendering different transparency between a liquid-absorbed state and a liquid-unabsorbed state; said writing instrument comprising a main body (casing 16), a pen point (pen nib 24) attached to the front end (lead portion 18) of the main body, and a water absorber (pen core 20) held in the interior of the main body, the front end of said water absorber being connected to the rear end of the pen point ("A pen core 20 is provided in the casing 16, and a nib body [liquid applying portion] 22 is fitted in the lead portion 18. This nib body 22 is connected with a lead end of the pen core 20, and a pen nib 24 projects out of a lead face of the lead portion 18.", column 4, lines 60 – 65) so that said water absorber is internally suppleable ("This nib body 22 is connected with a lead end of the pen core 20") with the water by absorption, and said main body being provided at the rear end (bottom end portion of casing 16) thereof with a communicating hole (orifice in bottom end portion of casing 16

which bottom cap fits into) through which the rear end of said water absorber communicates with the outside.

Regarding claim 14, Ishigaki discloses all of the elements of the claim in figures 1A, 1B and 2, including a writing instrument for water-metachromatic members wherein said water absorber is so constructed (in communication with orifice) as to be internally suppliable (fillable) with water by absorption through the communicating hole (reference, orifice in bottom end portion of casing 16 which bottom cap fits into) at the rear of said main body.

Regarding claim 15, Ishigaki discloses all of the elements of the claim in figures 1A, 1B and 2, including a writing instrument for water-metachromatic members wherein said communicating hole at the rear of the main body is made open (bottom cap 14 removed) outside at a position rearward (on bottom end portion of casing 16) to the rear end (end opposite the "lead end of the pen core 20") of said water absorber.

Regarding claim 18, Ishigaki discloses all of the elements of the claim in figure 2, including a writing instrument for water-metachromatic members wherein a tail stopper (bottom cap 14) is fixed to the rear-end (bottom end portion) opening (clearance hole for bottom end cap 14) of said main body, and said communicating hole is provided in the tail stopper.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 - 5, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, in view of Dotson.

Regarding claim 1, Lee discloses all of the elements of the claim, including a water-metachromatic sheet ("water reactive paper", commercially available from JIN AN Industrial Co. Ltd., "The invention uses a special water reactive paper product as a sheet means for a toy. This type of paper is made with a coating, which becomes transparent when it is wetted. The underlying vivid and bright colors appear from the color of the paper substrate underneath the transparent coating. Upon an evaporation, the wetted writing gradually disappears due to air-drying. That is, when the water eventually dries, within a short period of time, the coating is no longer transparent and the bright underlying color of the paper substrate disappears. For durability, the same coating process can be applied on a more durable substrate, such as colored PVC sheets, with either a solid color or a multi-color base. One manufacturer of the water reactive paper is JIN AN Industrial Co. Ltd., 175 Min Tsu West Road, Taipei, Taiwan Roc. with an in-house plant at 21, Tsun Yuen Road 1, Chung Yang Industrial Estate, Taipei. The paper is sold under the trademark "Water Writer", as item No. 961. The manufacturer describes the paper as being 200 lb. simile paper, in 0.18 mm thickness, which has a solid neon color set in a printing process. The paper is given a white 0.03 mm thick chemical coating of silica (SiO₂) which is applied

with a knife coating process and then is naturally dried at 25.degree. Celsius during approximately a 20 minute period although drying may be carried out in an automatic oven. The chemical silica has a characteristic causing it to remain an opaque solid when it is dry and to become transparent when it is wet. The material also has other absorbency features. A resin ingredient is applied in the silica coating composition to prevent permanent tracings, thus making possible the repeated use of the wet/dry sequence without deteriorating either the silica coating or the paper stock quality. Thus, the invention begins with an existing neon coated substrate, such as a bright and vivid colored paper stock, which is commonly available in the market place and which is known as "water reactive paper"., section titled "Description", paragraphs 18 – 21) which comprises a support ("simile paper") and provided on the surface thereof a porous layer ("a white 0.03 mm thick chemical coating of silica") formed of a binder resin ("A resin ingredient is applied") to which fine-particle silicic acid ("A resin ingredient is applied in the silica coating composition") stands fixed dispersedly, and is capable of rendering different transparency ("The chemical silica has a characteristic causing it to remain an opaque solid when it is dry and to become transparent when it is wet.") between a liquid-absorbed state (wet) and a liquid-unabsorbed state (dry).

But, Lee lacks a support which is a **cloth** having a weight per unit area of 30 g/m² to 1,000 g/m², said fine-particle silicic acid is held in said porous layer in an amount of from 1 g/m² to 30 g/m², and said fine-particle silicic acid is incorporated in an amount ranging from 0.5 part by weight to 2 parts by weight based on 1 part by weight of the binder resin.

However, in figure 1, Dotson teaches a support (substrate 4) which is a cloth ("Substrates which may be used for the novelty products of the invention include, but are not limited to ... natural and synthetic cloth", column 5, lines 55 - 57) and a support ("A preferred ... substrate is offset paper ... and has a weight of about 50 pounds per ream", column 5, lines 61 - 63) having a weight per unit area of 30 g/m^2 to $1,000 \text{ g/m}^2$, (188 g/m^2 is equal to 50 pounds per ream) having fine-particles (combined organic-based dye 8 and organic-based color developer 10, column 5, lines 15 - 22) held in a porous layer (layer 6) in an amount of from 1 g/m^2 to 30 g/m^2 (from about 0.66 to 4 g/m^2), the fine-particles being incorporated in an amount ranging from 0.5 part by weight to 2 parts by weight based on 1 part by weight of the binder resin (for example, 0.7 parts by weight, with 50% binder resin and 35% combined organic-based dye and color developer, or, for example, 1.2 parts by weight, with 30% binder resin and 35% combined organic-based dye and color developer, column 5, lines 15 - 22).

Therefore, it would have been obvious, in view of Dotson, to have a water-metachromatic **cloth** sheet which comprises a support and provided on the surface thereof a porous layer formed of a binder resin to which fine-particle silicic acid stands fixed dispersedly, and is capable of rendering different transparency between a liquid-absorbed state and a liquid-unabsorbed state, wherein said support is a **cloth** having a weight per unit area of 30 g/m^2 to $1,000 \text{ g/m}^2$, said fine-particle silicic acid is held in said porous layer in an amount of from 1 g/m^2 to 30 g/m^2 , and said fine-particle silicic acid is incorporated in an amount ranging from 0.5 part by weight to 2 parts by weight based on 1 part by weight of the binder resin, for the purpose of providing a multicolor printing system wherein "a

layer containing organic-based dye particles and organic-based developer particles is deposited or printed on a substrate, preferably as a latent or substantially invisible image.”, (column 3, lines 8 – 12, Dotson).

Regarding claim 2, as best understood, Lee discloses most of the elements of the claim, including a water-metachromatic cloth sheet wherein said fine-particle silicic acid is produced by a wet process (“a coating of silica which is applied with a knife coating process and then is naturally dried at 25 degree Celsius ... in an automatic oven”, section titled “Description”, paragraph 19, second sentence) and having a two-dimensional structure (the thickness is 0.03 mm thick, which is essentially two-dimensional). But, Lee lacks fine-particles having a diameter of from 0.03 microns to 10 microns, and a binder resin being a polyurethane resin. However, Dotson teaches fine-particles having a diameter of from 0.03 microns to 10 microns (“having an average particle size of from about 2 to about 6 microns”, column 2, lines 22 – 24), and binder resins being polyurethane type polymer (“Plastic substrates include polyester, polystyrene, polypropylene and the like.”, column 5, lines 57 - 59) resins.

Therefore, it would have been obvious, in view of Dotson, to have a water-metachromatic cloth sheet wherein said fine-particle silicic acid is a silicic acid having a particle diameter of from 0.03 microns to 10 microns, produced by a wet process and having a two-dimensional structure, and said binder resin is a polyurethane resin, for the purpose of providing “a method for developing an image on a substrate which comprises providing a dispersion of organic-based dye particles having an average particle size of from about 2 to about 6 microns and organic-based developer particles having

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average particle size of from about 2 to about 6 microns in an aqueous carrier fluid. The dispersion is printed on a substrate so that a substantially invisible image or latent image is produced. The printed substrate is then contacted with an imaging device containing an oxygenated solvent to develop a visible image on the substrate from the substantially invisible image.”, (column 2, lines 3 – 13, Dotson).

Regarding claim 3, Lee discloses all of the elements of the claim, including a water-metachromatic cloth sheet wherein a colored layer (“said sheet means comprising a colored substrate”) is further provided as a lower layer (lower layer, substrate) or an upper layer of, or in the vicinity of, a porous layer (“said sheet is PVC coated with a combination of silica and resin”). (Column 4, lines 38 – 50, Lee).

Regarding claim 4, Lee discloses all of the elements of the claim, including a water-metachromatic cloth sheet wherein a water-impermeable sheet material (“colored PVC sheets”) is provided on the back of said porous layer. But, still, Lee is silent regarding a water-metachromatic cloth sheet wherein a water-impermeable sheet material is provided on the back of a cloth. However, Dotson teaches substrates that “include, but are not limited to”, a wide variety of materials, including both water-metachromatic cloth sheet (natural and synthetic cloth) and water-impermeable sheet material (“Plastic substrates include [the polymers] polyester, polystyrene, polypropylene and the like.”, column 5, lines 55 - 59) provided as substrate materials. Polyurethane is one type of polymer used for many of the same applications as polymers such as polyester, polystyrene, polypropylene and the like.

Therefore, it would have been obvious, in view of Dotson, and the above, to have a water-metachromatic cloth sheet wherein a water-impermeable sheet material is provided on the back of said cloth, for the purpose of providing a product wherein, "For durability, the same coating process can be applied on a more durable substrate, such as colored PVC sheets, with either a solid color or a multi-color base.", (section titled "Description", paragraph 17, last sentence, Lee).

Regarding claim 5, Lee discloses all of the elements of the claim, including a water-metachromatic sheet wherein a water-resistant sheet material (such as Water Writer" paper ... being 200 lb. simile paper, in 0.18 mm thickness ... is given a white 0.03 mm thick chemical coating", paragraph 19, first and second sentences) is a sheet with a thickness of from 1 microns to 3 mm (total thickness of 0.21 mm), and a water-metachromatic plastic sheet wherein said water-impermeable sheet material made of a material selected from a soft thermoplastic resin ("colored PVC sheets", section titled "Description", paragraph 17, last sentence). But, Lee lacks a water-metachromatic cloth sheet wherein said sheet is made of a material selected from a soft thermoplastic resin and a thermoplastic elastomer.

However, Dotson discloses a water-metachromatic cloth sheet ("Substrates which may be used for the novelty products of the invention include, but are not limited to ... natural and synthetic cloth", column 5, lines 55 - 57), and a thermoplastic elastomer ("when the substrate 4 is a thin web such as paper or a plastic film.", column 5, lines 50 - 52 and "Plastic substrates include polyester, polystyrene, polypropylene and the like.", column 5, lines 55 - 59).

Therefore, it would have been obvious, in view of Dotson, to have a water-metachromatic cloth sheet wherein said water-impermeable sheet material is a sheet with a thickness of from 1 microns to 3 mm, made of a material selected from a soft thermoplastic resin and a thermoplastic elastomer for the purpose of providing a product wherein, "For durability, the same coating process can be applied on a more durable substrate, such as colored PVC sheets", (section titled "Description", paragraph 17, last sentence, Lee).

Regarding claim 7, Lee, in view of Dotson, as described above, discloses all of the elements of the claim, including a water-metachromatic toy set (inventive toy 20) which comprises the water-metachromatic cloth sheet (water reactive paper Lee/cloth Dotson) and a water-providing means (accessories in the form of a roller, or a rubber stamp, or a spray bottle, or stencils, or a marker/water pen 32 figures 2 – 6, respectively, Lee).

Regarding claim 10, Lee discloses all of the elements of the claim, described in section titled "Description", paragraph 23, including a water-metachromatic toy set wherein said writing instrument comprises a holder (rubber stopper 34) which holds a pen point (felt tip), and a container ("an elongated, hollow cylinder in a size and shape of a pencil or ball point pen") capable of holding water directly in its interior (hollow), a pour opening ("A rubber stopper 34 may close the top of the cylinder after it has been filled with water.") from which water is poured into the container being provided at the front end of the container, and said holder being so constructed as to be detachably fitted ("A rubber stopper 34 may

close the top of the cylinder") to the pour opening, and the interior of said container being hermetically closed (by the rubber stopper) when said holder is fitted to said pour opening.

4. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, in view of Dotson, and further in view of Ishigaki.

Regarding claim 8, Lee discloses all of the elements of the claim, including a water-metachromatic toy set wherein said water-providing means is selected from any of a stamp type (stamp, shown in figure 3) comprising a synthetic resin porous member (flat rubber face plate, section titled "Description", paragraph 24, second sentence) having open cells (rubber has open cells) or a fibrous worked member and a writing instrument type (marker/water pen 32, shown in figure 6) comprising the synthetic resin porous member or fibrous worked member (felt tip, section titled "Description", paragraph 26, second sentence) used as a pen point (tip of accessory marker/water pen) material.

Regarding claim 9, Lee discloses all of the elements of the claim in the section titled "Description", paragraphs 23 and 26, including a water-metachromatic toy set wherein said writing instrument (marker, figure 6) comprises a main body (an elongated hollow cylinder, paragraph 23), a pen point (felt tip, paragraph 26) formed of the synthetic resin porous member or fibrous worked member (felt is fibrous) and fitted (shown in figure 6) to the front end of the main body, and communicating holes ("tip of the pen" and "top of the cylinder", column 3, lines 8 – 10 and 7) being provided at a suitable portion of said main body to

make the water absorber communicate with the outside. But, Lee lacks the front end of said pen point being connected to the front end of a water absorber formed of a fiber bunch, held in said main body, and communicating holes being provided at a suitable portion of said main body to make the water absorber communicate with the outside.

However, in figures 1A, 1B and 2, Ishigaki teaches a front end (pen nib 24) of a pen point (nib body 22) being connected to the front end (the lead end) of a water absorber (pen core 20) formed of a liquid-absorbing bunch, held in said main body. Therefore, it would have been obvious, in view of Ishigaki to have a water-metachromatic toy set wherein said writing instrument comprises a main body, a pen point formed of the synthetic resin porous member or fibrous worked member and fitted to the front end of the main body, the front end of said pen point being connected to the front end of a water absorber formed of a fiber bunch, held in said main body, and communicating holes being provided at a suitable portion of said main body to make the water absorber communicate with the outside, for the purpose of providing a product wherein "the water within the cylinder is released in quantities appropriate for writing upon the water reactive paper", (Column 3, lines 30 – 32 and figure 6, Lee).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, in view of Dotson, in further view of Ishigaki, and further in view of Sainte Marie.

Regarding claim 11, Lee discloses all of the elements of the claim, including a water-metachromatic toy set (toy 20, shown in figures 1 - 6) wherein said holder comprises a cylindrical pen point holding member (water pen 32, shown in figure 6) capable of holding a

pen point ("the tip may be a small capillary steel tube or a felt tip", column 3, lines 4 – 5 and 28 – 32, note typographical error in reference, where FIG. 5 should read FIG. 6) at its outer surface. But, Lee lacks said cylindrical pen point holding member being inserted from said pour opening and disposed in said container, and a gap being provided between the outer surface of said pen point and the inner surface of said pen point holding member, the gap being a gap through which the interior of said container communicates with the exterior of said container and at which the water is held by the aid of a capillary force.

However, in figures 3 - 9, Sainte Marie teaches a toy wherein the holder (writing instrument 10) comprises a cylindrical pen point holding member (reservoir 12) capable of holding a pen point ("front end 11b acting as a writing tip", column 5, lines 15 – 16) at its outer surface, said cylindrical pen point holding member being inserted from said pour opening (orifice of reservoir 12) and disposed in said container, and a gap (see figure 3 at front end 11b of transfer rod 11) being provided between the outer surface of said pen point and the inner surface of said pen point holding member, the gap being a gap through which the interior of said container communicates (is an open passageway) with the exterior of said container and at which the water (liquid ink 15) is held by the aid of a capillary force ("The bottom portion of the capillary element 13 dips into the liquid ink 15 which migrates throughout the entire capillary network of the element 13. The ink contained in the capillary network can itself migrate into the transfer rod 11 via the zones 13c and 11c which are in contact between the capillary element 13 and the transfer rod 11. Naturally it is necessary for the capillary network of the element 13 to

have sufficient capillarity to enable such diffusion to take place in that zone", column 5, lines 41 - 49).

Therefore, it would have been obvious, in view of Sainte Marie, to have a water-metachromatic toy set wherein said holder comprises a cylindrical pen point holding member capable of holding a pen point at its outer surface; said cylindrical pen point holding member being inserted from said pour opening and disposed in said container, and a gap being provided between the outer surface of said pen point and the inner surface of said pen point holding member, the gap being a gap through which the interior of said container communicates with the exterior of said container and at which the water is held by the aid of a capillary force, for the purpose of providing a writing instrument wherein "Loss of priming is prevented" ... because ... "The ink contained in the capillary network can itself migrate into the transfer rod", column 5, lines 41 – 45, Sainte Marie).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigaki, in view of Lee.

Regarding claim 13, Ishigaki discloses all of the elements of the claim, including a writing instrument for water-metachromatic members wherein said water absorber is so constructed as to be internally suppliable with water. But, Ishigaki lacks a water absorber so constructed as to be internally suppliable with water by absorption from the pen point. However, Lee teaches a writing instrument (water pen 32) for water-metachromatic members ("water reactive paper", column 2, lines 57 – 60) wherein the reservoir of the

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writing instrument is so constructed as to be internally suppliable ("In the alternative, the tip of the water pen may be dipped in water. Then the cylinder may be squeezed and released to draw water into the cylinder.", column 3, lines 8 – 10) with water by absorption through the pen point. Therefore, it would have been obvious, in view of Lee, to have a writing instrument for water-metachromatic members wherein said water absorber is so constructed as to be internally suppliable with water by absorption from the pen point, for the purpose of providing a simple and effective method for young children to utilize the toy by filling the pen with water, and for the purpose of providing "an improved magic and surprise material for the fun and amusement for the young and old alike.", (Column 1, lines 45 – 47, Lee).

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigaki, in view of Sainte Marie.

Regarding claim 16, Ishigaki discloses all of the elements of the claim, but for a writing instrument for water-metachromatic members wherein a communicating hole through which the front end of said water absorber communicates with the outside is provided at the front portion of said main body. However, in figures 1 – 3, Sainte Marie teaches a writing instrument for water-metachromatic members wherein a communicating hole (clearance in hole shown in cross-section of reservoir 12 near 11b in figure 3) through which the front end of a liquid reservoir communicates with the outside is provided at the front portion of said main body.

Therefore, it would have been obvious, in view of Sainte Marie, to have a writing instrument for water-metachromatic members wherein a communicating hole through which the front end of said water absorber communicates with the outside is provided at the front portion of said main body, for the purpose of providing a writing instrument wherein "Loss of priming is prevented" ... because ... "The ink contained in the capillary network can itself migrate into the transfer rod", column 5, lines 41 - 45).

Regarding claim 17, Ishigaki discloses all of the elements of the claim, but for a writing instrument for water-metachromatic members wherein said pen point and said water absorber each comprises a fibrous worked member or a synthetic resin porous member, and said pen point has a capillary force set greater than the capillary force of said water absorber.

However, in figures 3 – 9, Sainte Marie teaches a writing instrument (writing instrument 10) for water-metachromatic members wherein a pen point (front end 11b of transfer rod 11) and a water absorber (capillary element 13) each comprises a fibrous worked member ("transfer rod 11 (is) made of acrylic fibers of or polyester", column 5, line 58) or a synthetic resin porous member ("the capillary element 13 is preferably made of a sintered microporous material having open pores" ... "is also comprises polyethylene or polypropylene material", column 5, lines 58 - 64), and said pen point has a capillary force (proportional to surface energy) set greater than the capillary force of said water absorber ("the hydrophilic nature of the capillary element 13 relative to the ink used is improved by

subjecting the material constituting the element 13 to a treatment enabling the surface energy of the material to be increased" ... "thereby enabling it to diffuse into the capillary network of the element 13 and all the way to the transfer rod 11", (column 6, lines 19 – 35).

Therefore, it would have been obvious, in view of Sainte Marie, to have a writing instrument for water-metachromatic members wherein said pen point and said water absorber each comprises a fibrous worked member or a synthetic resin porous member, and said pen point has a capillary force set greater than the capillary force of said water absorber, for the purpose of providing a writing instrument wherein "Loss of priming is prevented" ... because ... "The ink contained in the capillary network can itself migrate into the transfer rod", column 5, lines 41 – 45, Sainte Marie).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, in view of Dotson, and further in view of Seiber.

Regarding claim 6, Lee discloses all of the elements of the claim, including a water-metachromatic cloth sheet wherein said cloth is cut in a quadrilateral. But, Lee is silent regarding a sheet having a side of at least 50 cm or longer. However, Seiber teaches a drawing sheet having a side of at least 50 cm (55.6 cm, 22") or longer (column 9, lines 29 – 40). Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time of the claimed invention, in view of Seiber, to have a water-metachromatic cloth sheet wherein said cloth is cut in a quadrilateral having a side of at least 50 cm or longer, for the purpose of providing a writing surface large enough for a child to play comfortably within its boundaries.

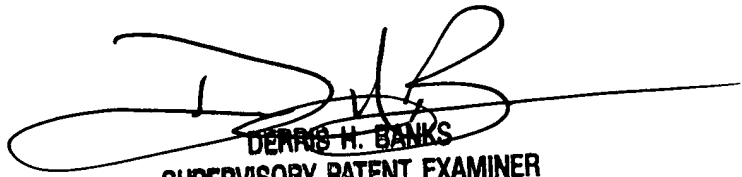
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George F Hufnagel whose telephone number is 703-605-1235. The examiner can normally be reached on Mon - Fri 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 703-308-1745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-872-9301.

GFH
June 17, 2002


DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
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